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REMARKS/ARGUMENTS

I.

Favorable reconsideration of this application as presently amended is respectfully requested.

Claims 21-23, 35 and 36 are presently active in the application. Claims 1-20 and 24-34 have been cancelled. Claims 30-34 are cancelled by the present amendment. Those claims were prosecuted to issue in parent application 09/053,050 now U.S. Patent No. 6,287,504. The parent application included a restriction requirement and an election of species in the office action mailed November 30, 1999. As a result of that restriction requirement and election of species requirement, claims 30-34 were prosecuted in the parent application. Divisional applications have been filed with respect to claims 1-20, 21-23 (the present application) and claims 24-29. In the preliminary amendment filed with the present application, claims 30-34 were inadvertently not canceled. Claims 35-36 have been added by the present amendment.

II.

A substitute specification was required in parent application serial No. 09/053,050 and applicants were required to file proposed drawing changes in divisional application serial No. 09,878,977. A substitute specification and the proposed drawing changes were also filed in divisional application serial No.09/878,987. The present application, the'977 application, and the '987 application are all divisional applications off of application serial No. 09/053,050. Accordingly, applicants have submitted the proposed drawing changes and a substitute specification herewith. Applicants respectfully submit that the proposed drawing changes and the substitute specification do not add new matter.

Applicants have further submitted a letter to the examiner requesting approval of the annotated sheets showing drawing changes and corrected drawing sheets.

II.

The rejections of claims 30-34 under 35 USC 112, second paragraph, claims 31, 33, and 34 under 35 USC 102(b) and claims 30 and 32 under 35 USC 102(b) or 35 USC 103(a) are moot because those claims have been cancelled.

III.

Claims 21-23 stand rejected under 35 USC 103(a) as being unpatentable over the admitted prior art of prior art 3 as set forth on page 3-4 of the instant specification and exemplified by Japanese document 6-304973. This rejection is respectfully traversed with respect to claim 21-23 as presently amended.

Claim 21 has been amended to recite that the compressed air causes the molten material to sink away from the vent hole and further recites "providing a at least one step in said non-transfer surface between said vent hole and said at least one transfer surface to prevent sinking of the molten material from proceeding from said at least one non-transfer surface to said at least one transfer surface." This step is shown, for example, by the element 26 in the molten material 20 formed by the indentation 6 in the sink element 16 of the mold assembly 10 as illustrated in Fig. 7B and as described, for example, on page 13 line 9-page 14 line 2 and with respect to Embodiments 1-10 on pages 12-20 of the substitute specification. The applied reference fails to teach or suggest placing a step between the vent hole and the transfer surface in order to preclude the sunken area around the vent hole from proceeding to the transfer surface. Accordingly, applicant submits that claim 21 is allowable.

Claims 22, 23, 35 and 35 depend either directly or indirectly from claim 21. The formation of a plurality of steps in the molding as set forth in claim 35 are shown, for example, in Fig. 7A and the formation of a step in the molding completely surrounds the vent hole as set forth in claim 36 is shown, for example, in Figs. 8 and 9A. Accordingly, those claims are allowable for the reasons stated above with regard to claim 21.

IV.

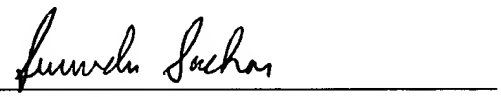
As requested on page 4 of the outstanding Office Action, copies of the prior art referred to on pages 2-7 of the specification are submitted herewith together with the available English language abstracts.

V.

For the reasons stated above applicant respectfully request favorable reconsideration and allowance of claims 21-23, 35 and 36.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Surinder Sachar
Registration No. 34,423

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

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Fig. 1 PRIOR ART

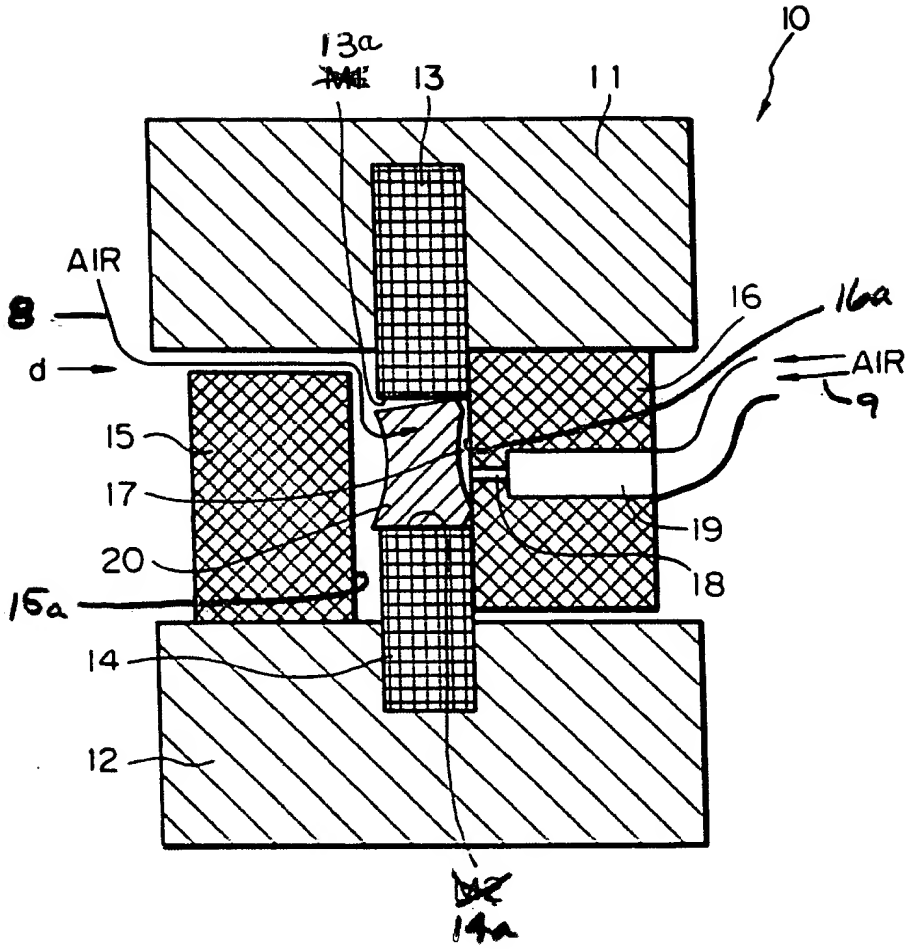


Fig. 2 PRIOR ART

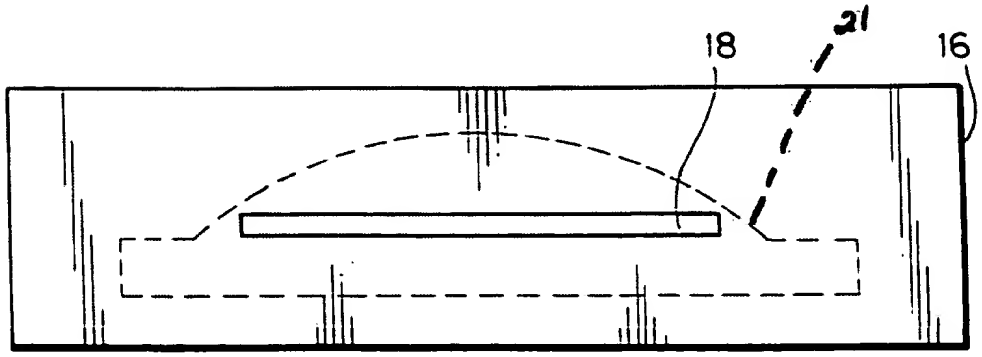


Fig. 3A PRIOR ART

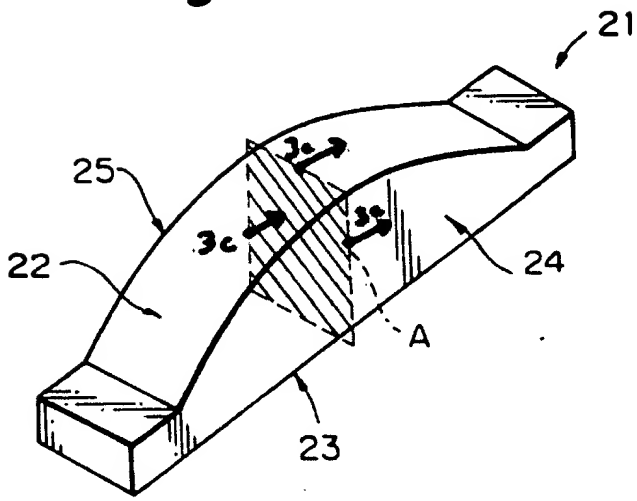


Fig. 3B PRIOR ART

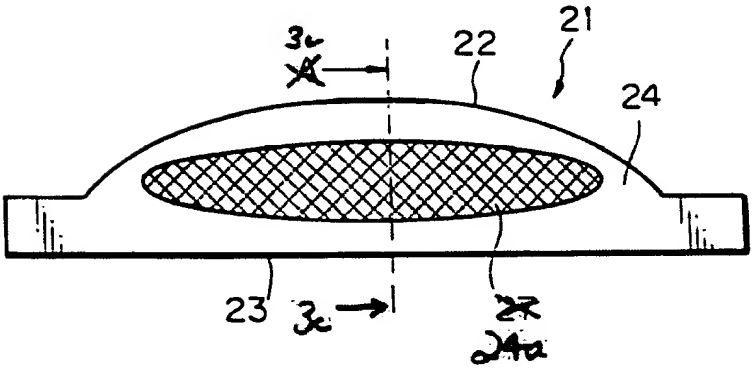


Fig. 3C
PRIOR ART

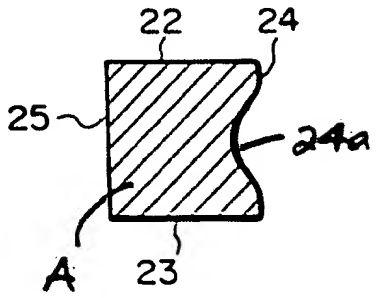


Fig. 4A PRIOR ART

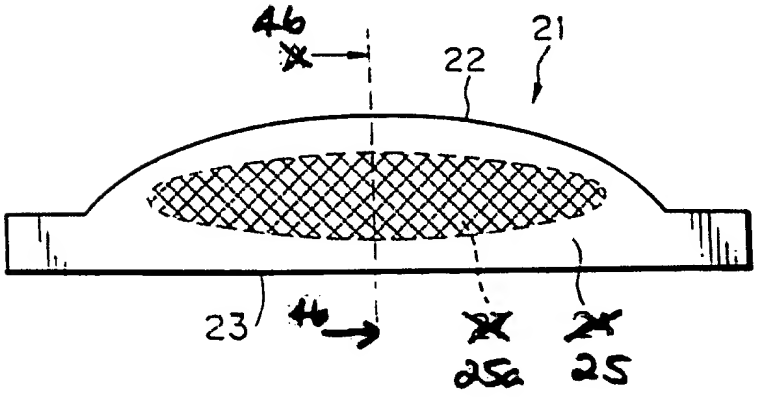


Fig. 4B
PRIOR ART

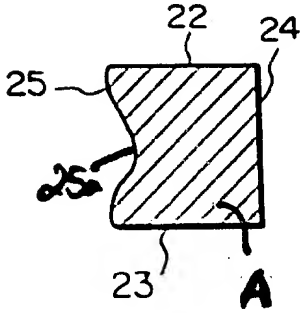


Fig. 5A PRIOR ART

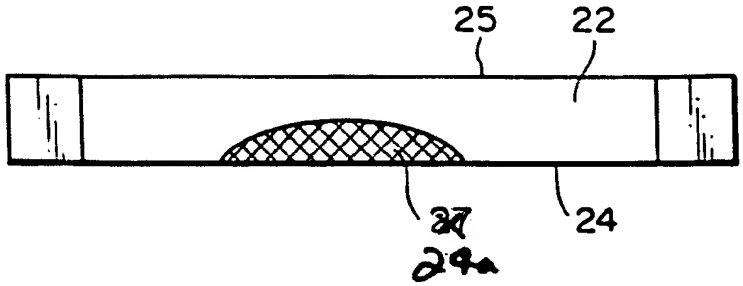


Fig. 5B PRIOR ART

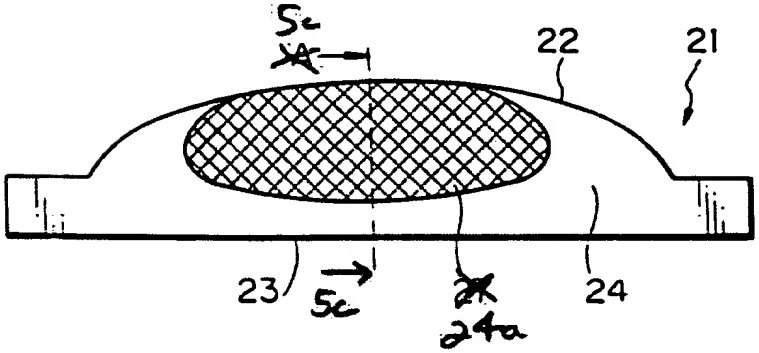


Fig. 5C
PRIOR ART

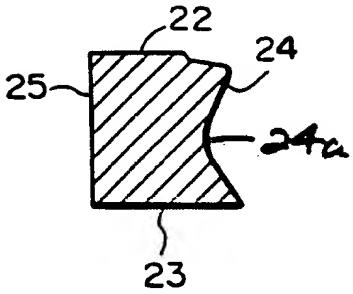


Fig. 6
PRIOR ART

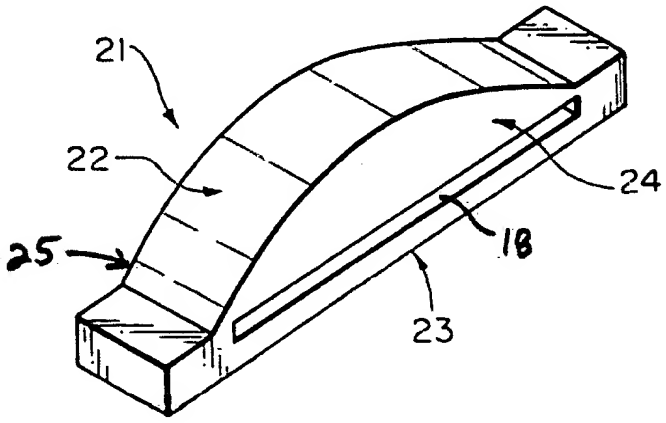


Fig. 7A

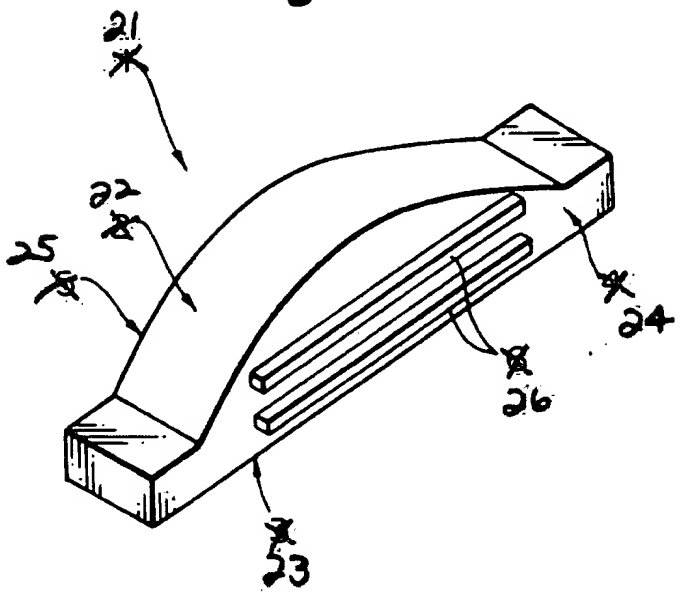


Fig. 7B

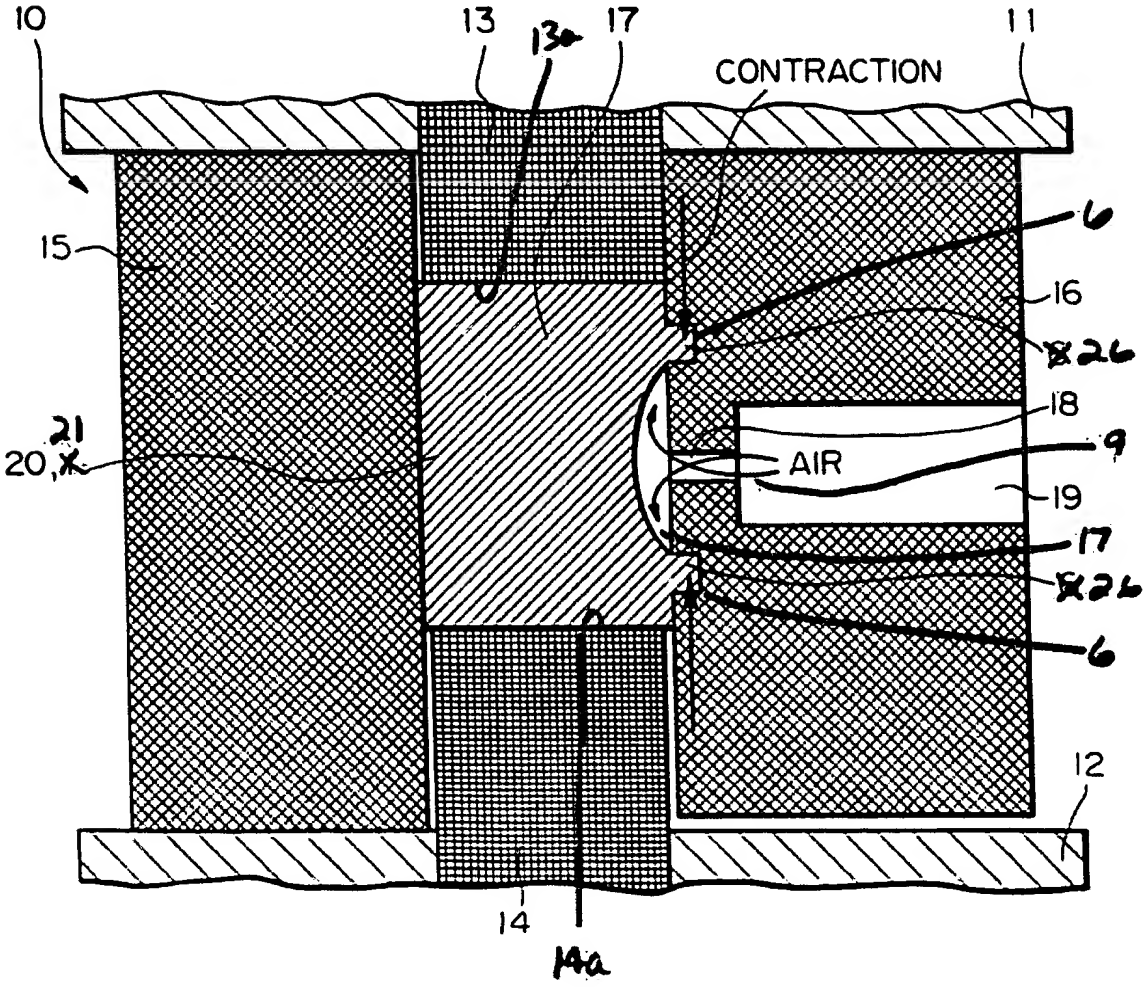


Fig. 8

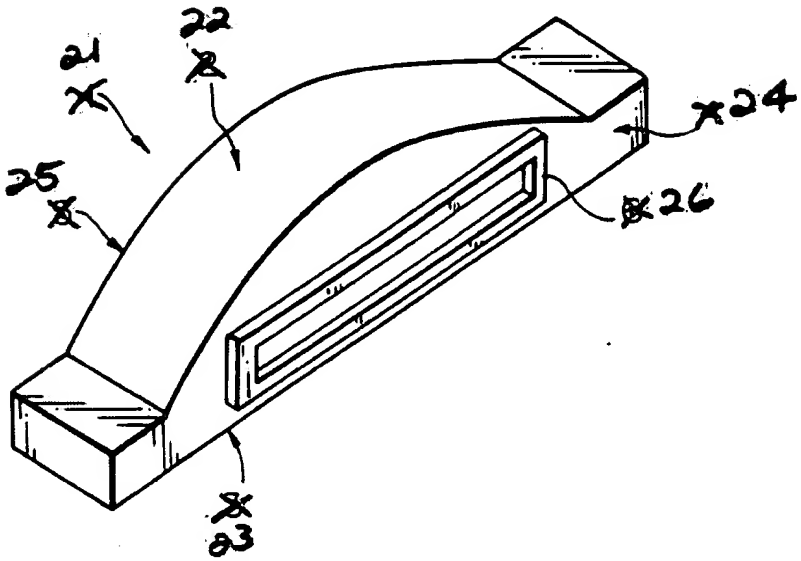


Fig. 9A

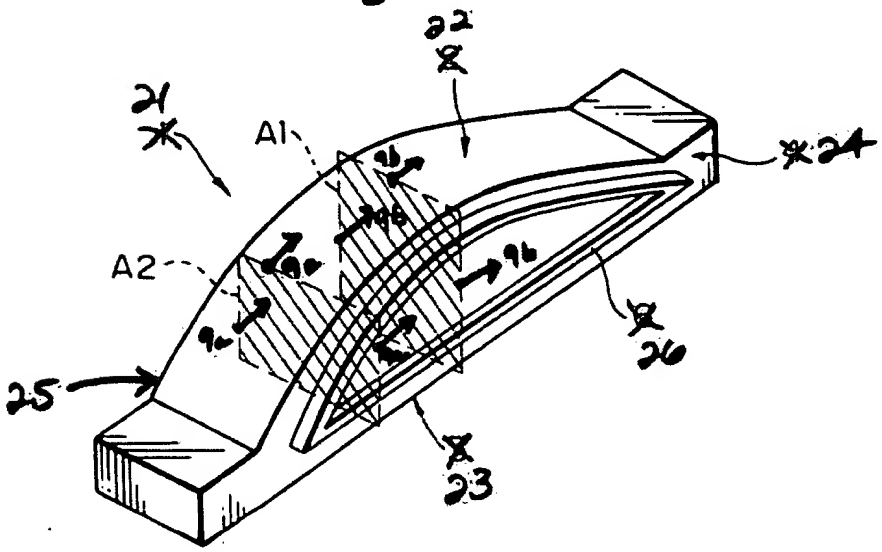


Fig. 9B

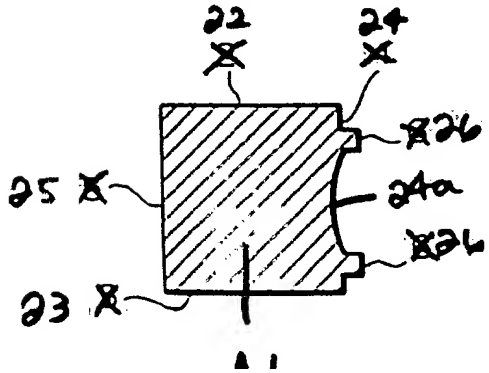


Fig. 9C

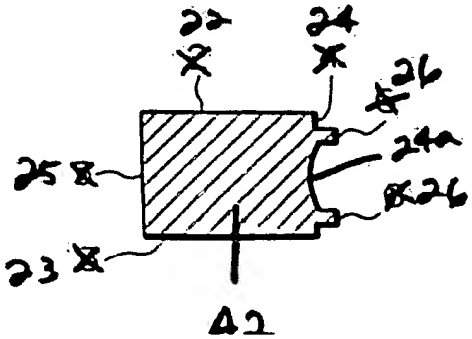


Fig. 10A

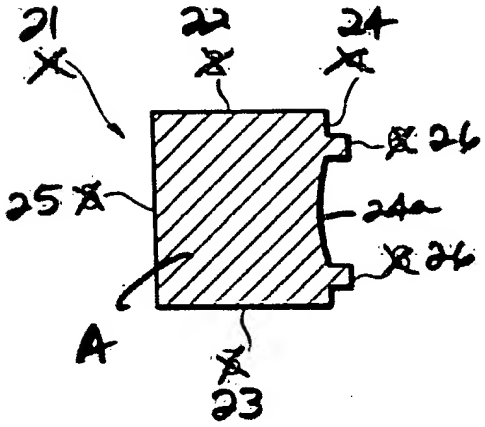
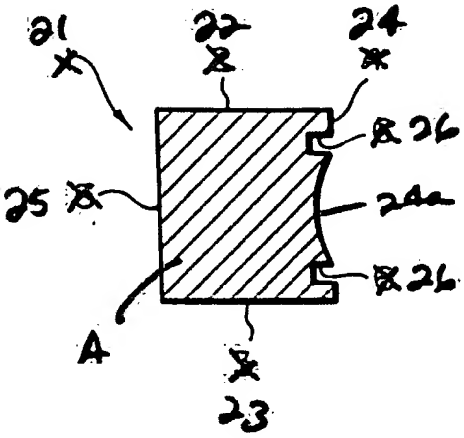


Fig. 10B



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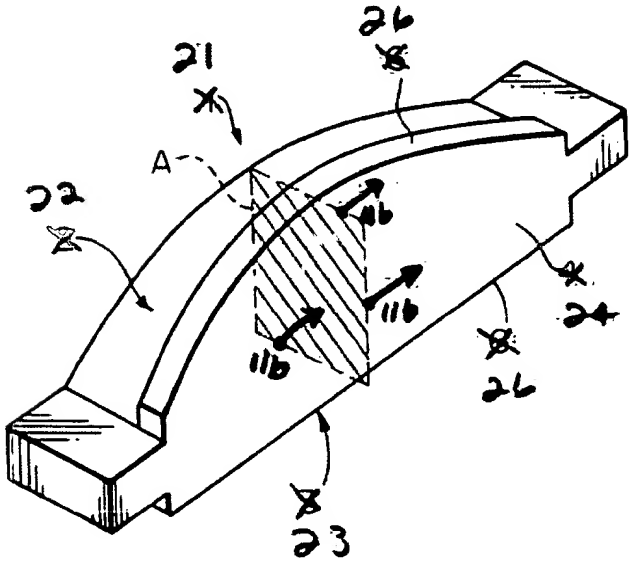


Fig. 11B

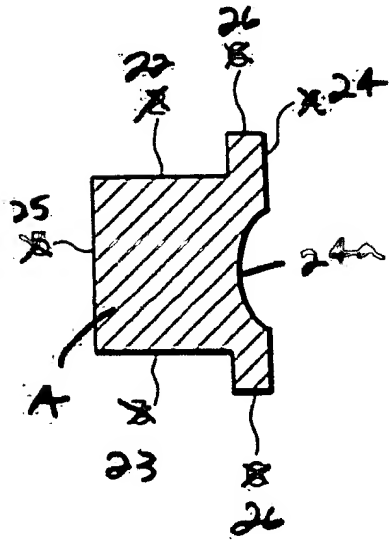


Fig. 12A

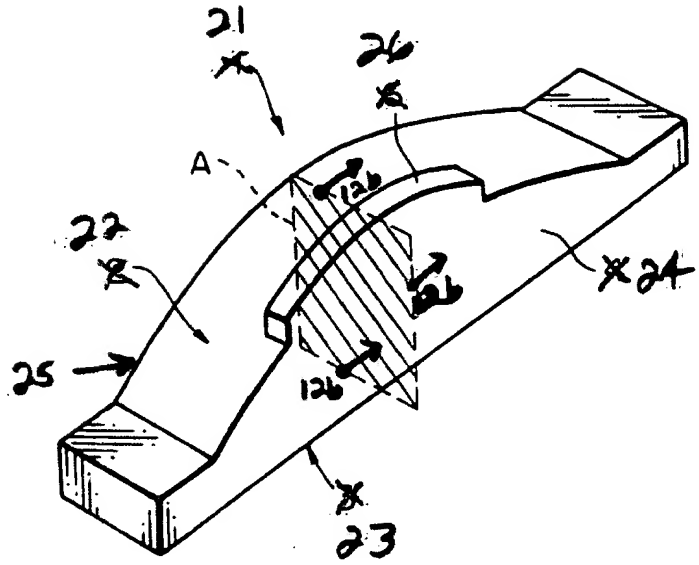


Fig. 12B

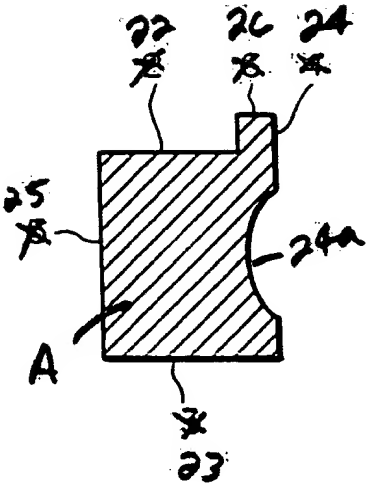


Fig. 13A

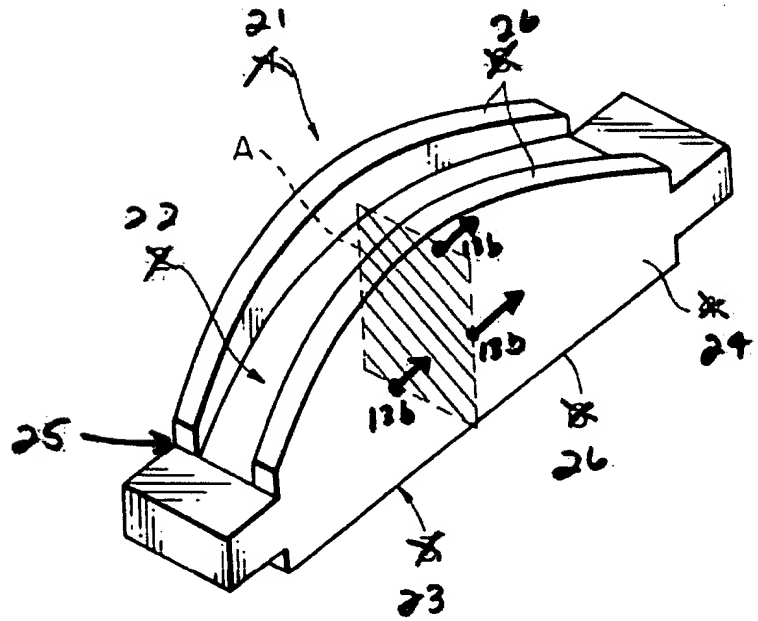
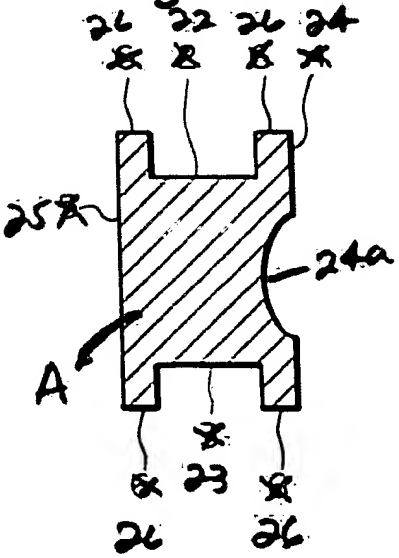


Fig. 13B



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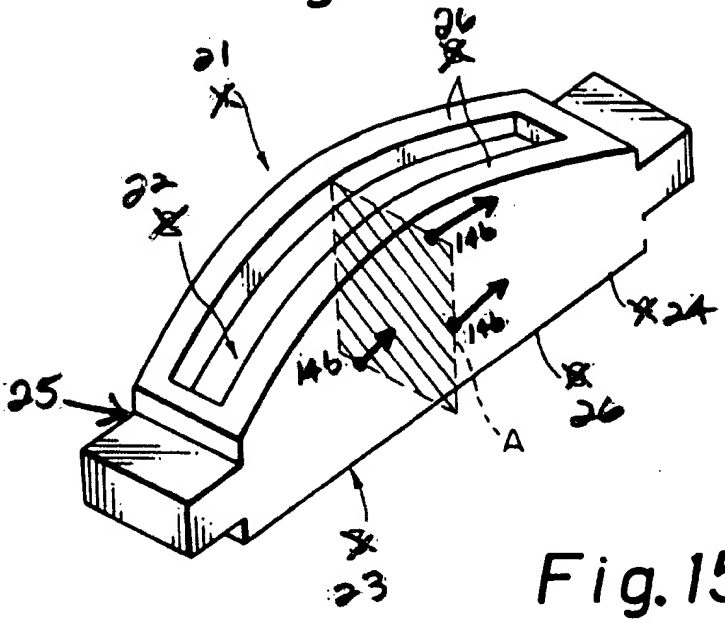


Fig. 14B

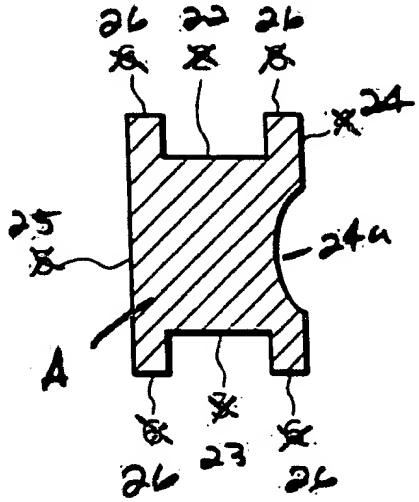


Fig. 15

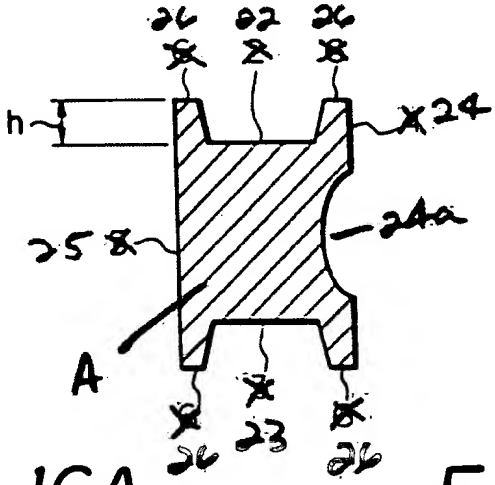


Fig. 16A

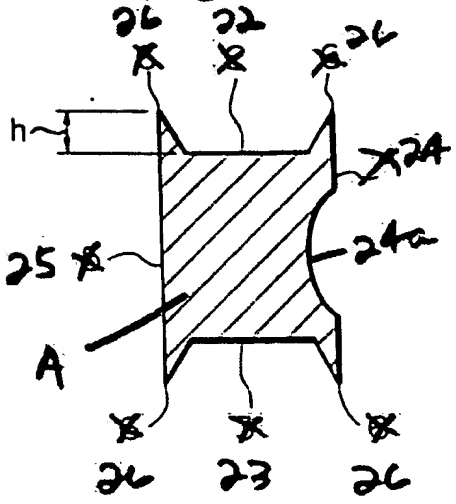


Fig. 16B

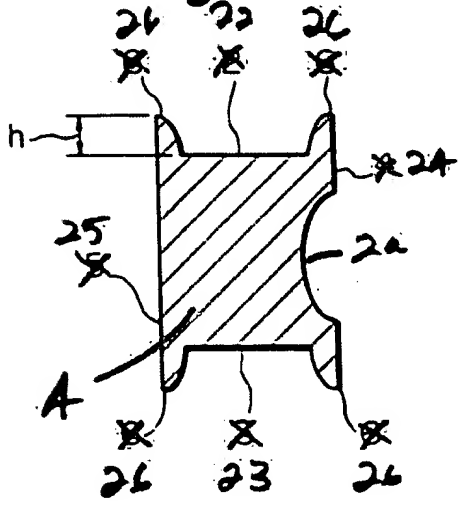


Fig. 17A

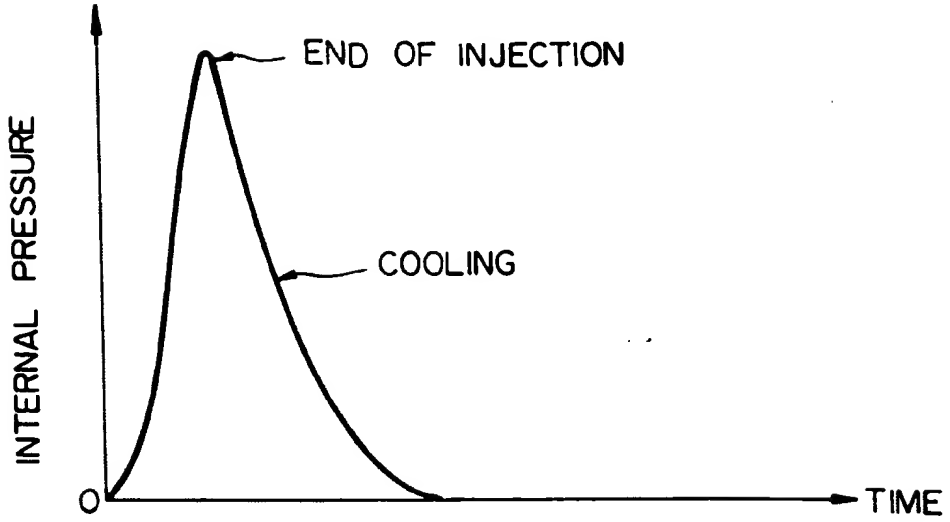
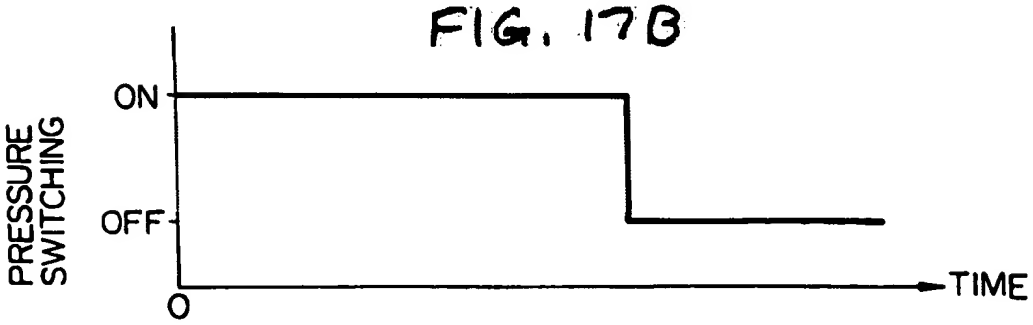


FIG. 17B



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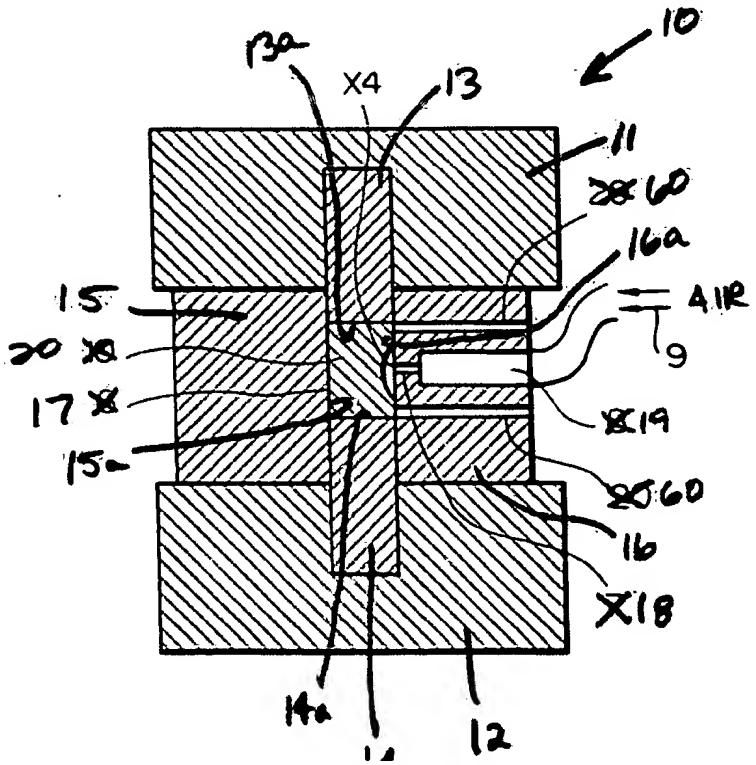

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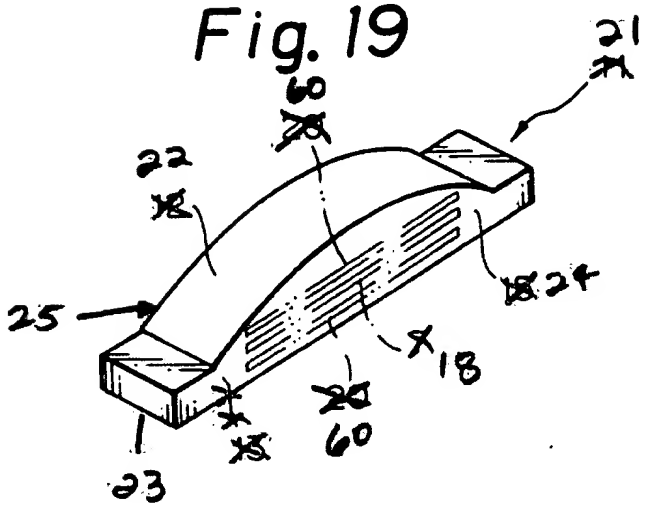

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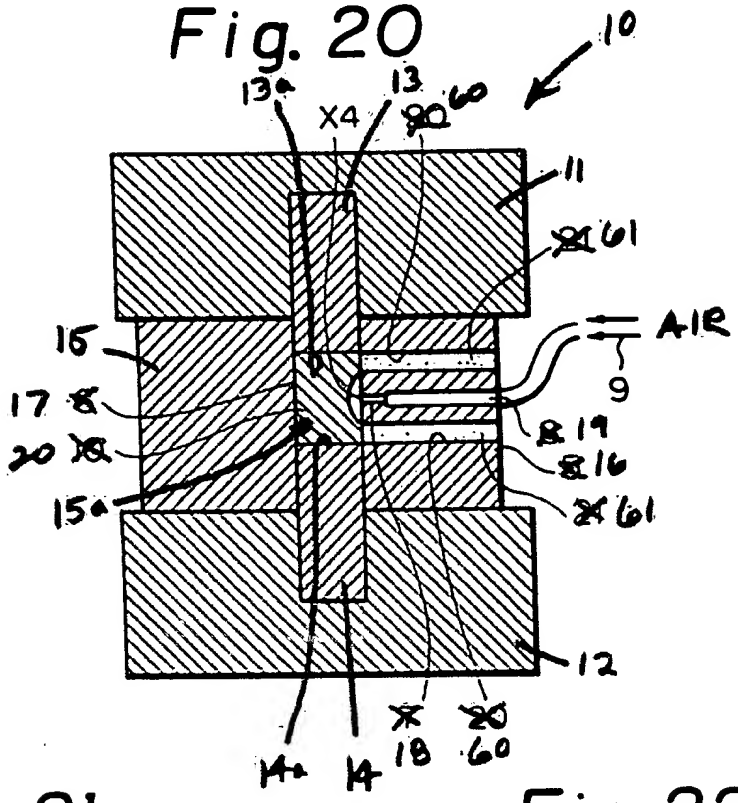


Fig. 21

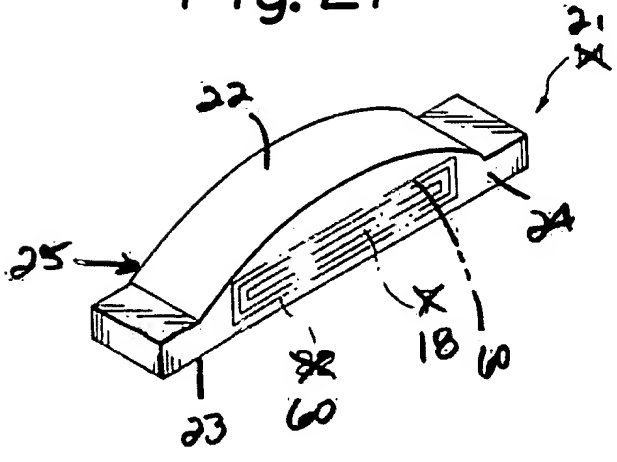


Fig. 22

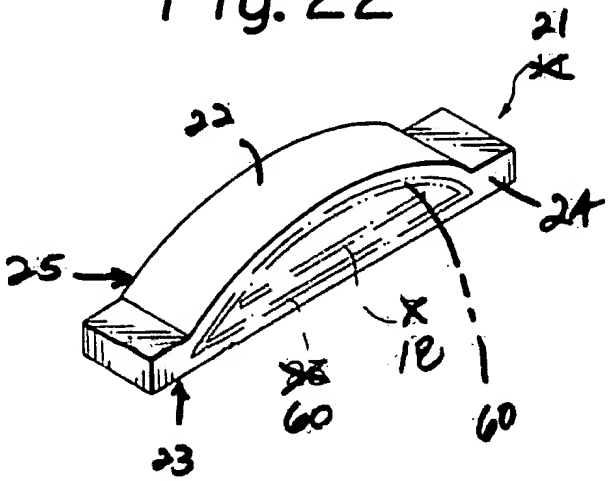


Fig. 23A

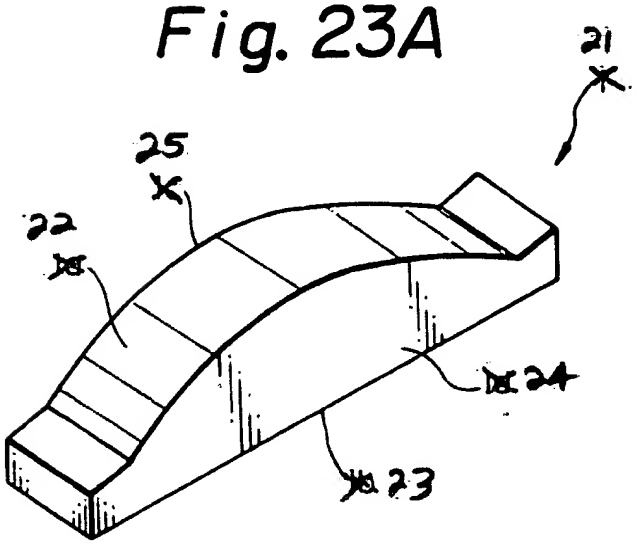


Fig. 23B

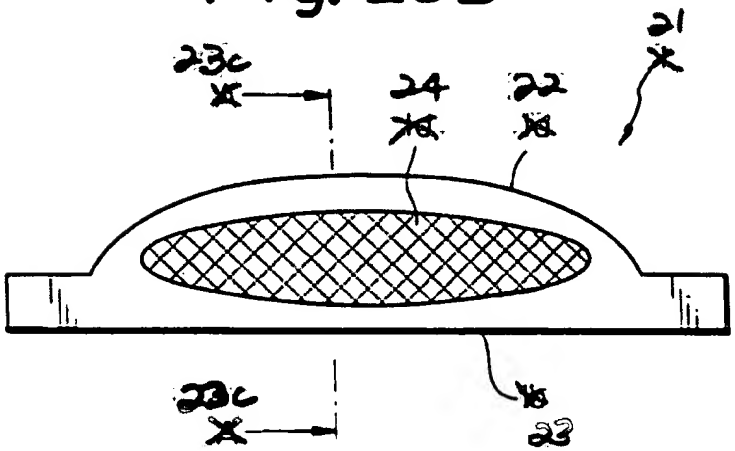


Fig. 23C

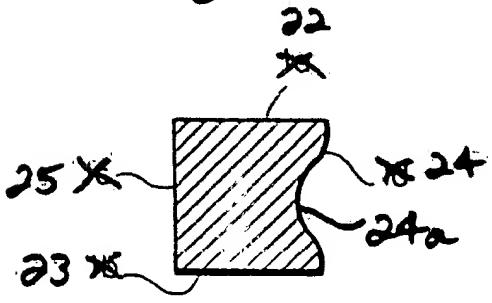


Fig. 24A

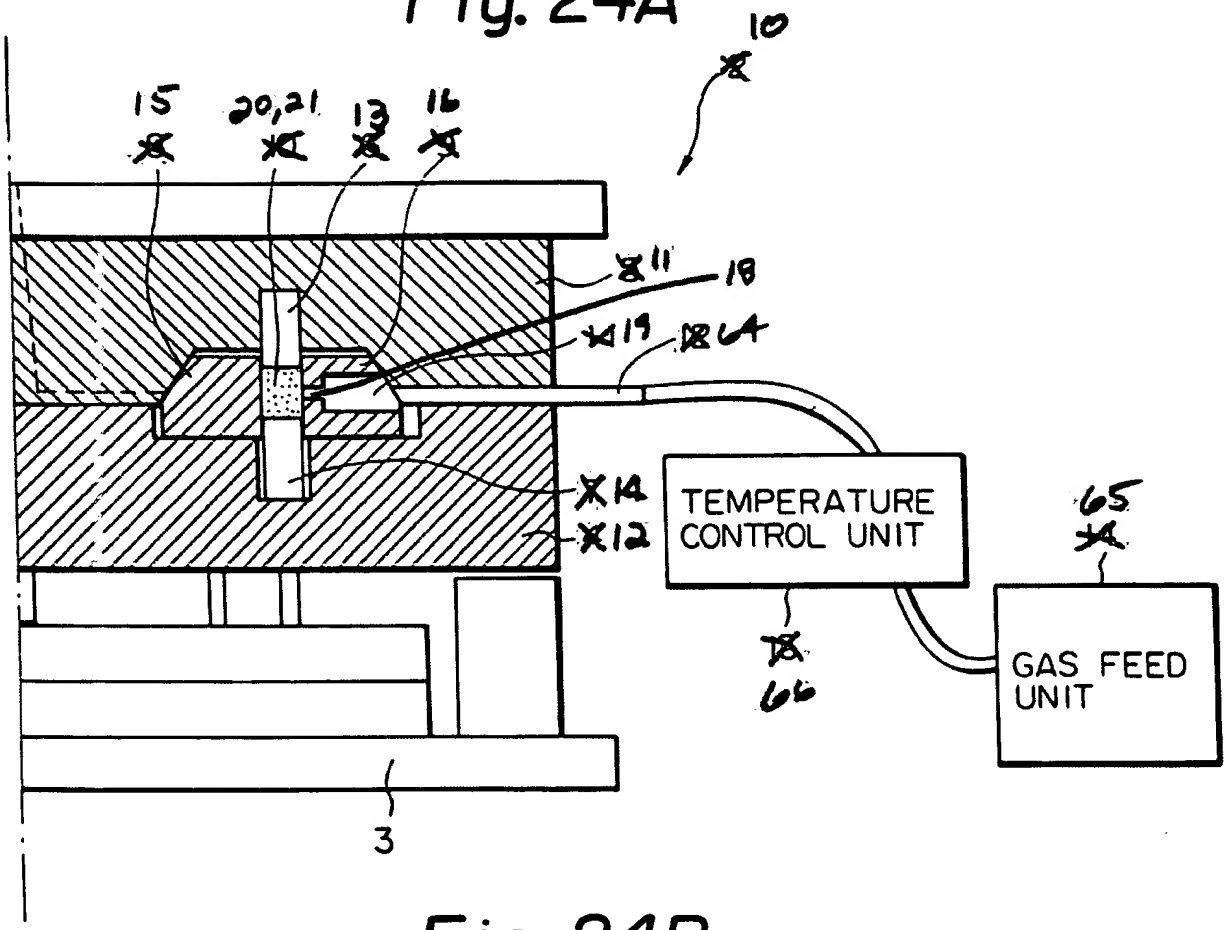
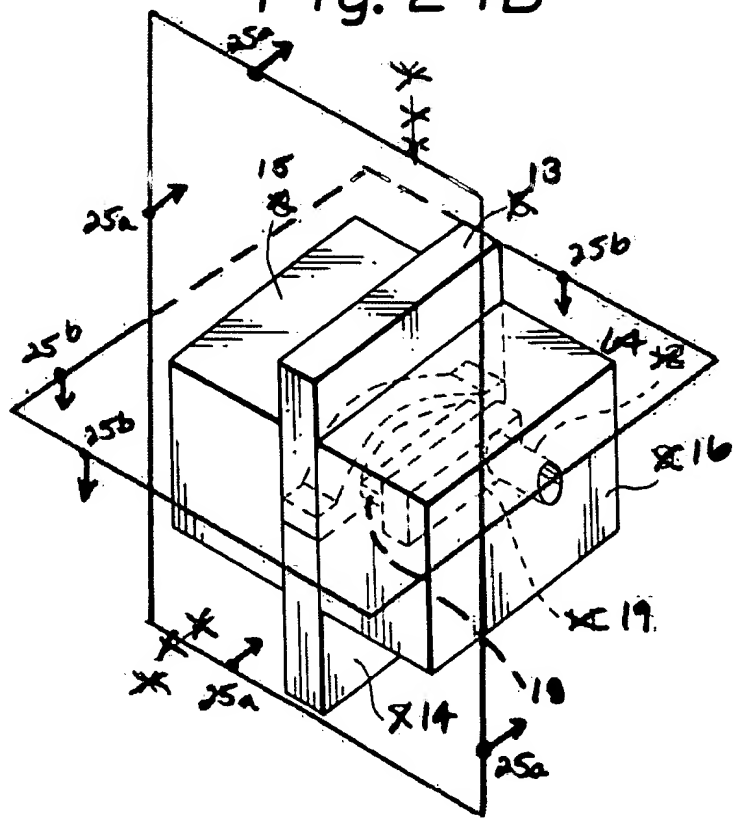


Fig. 24B



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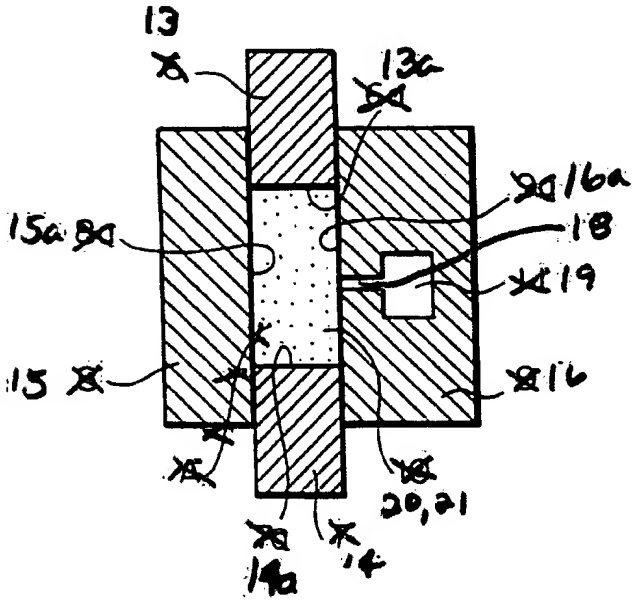
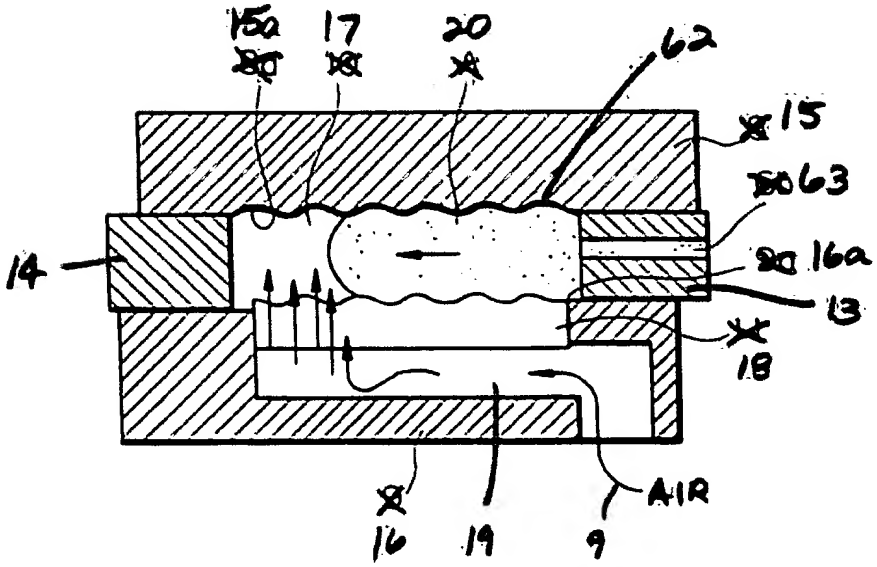


Fig. 25B



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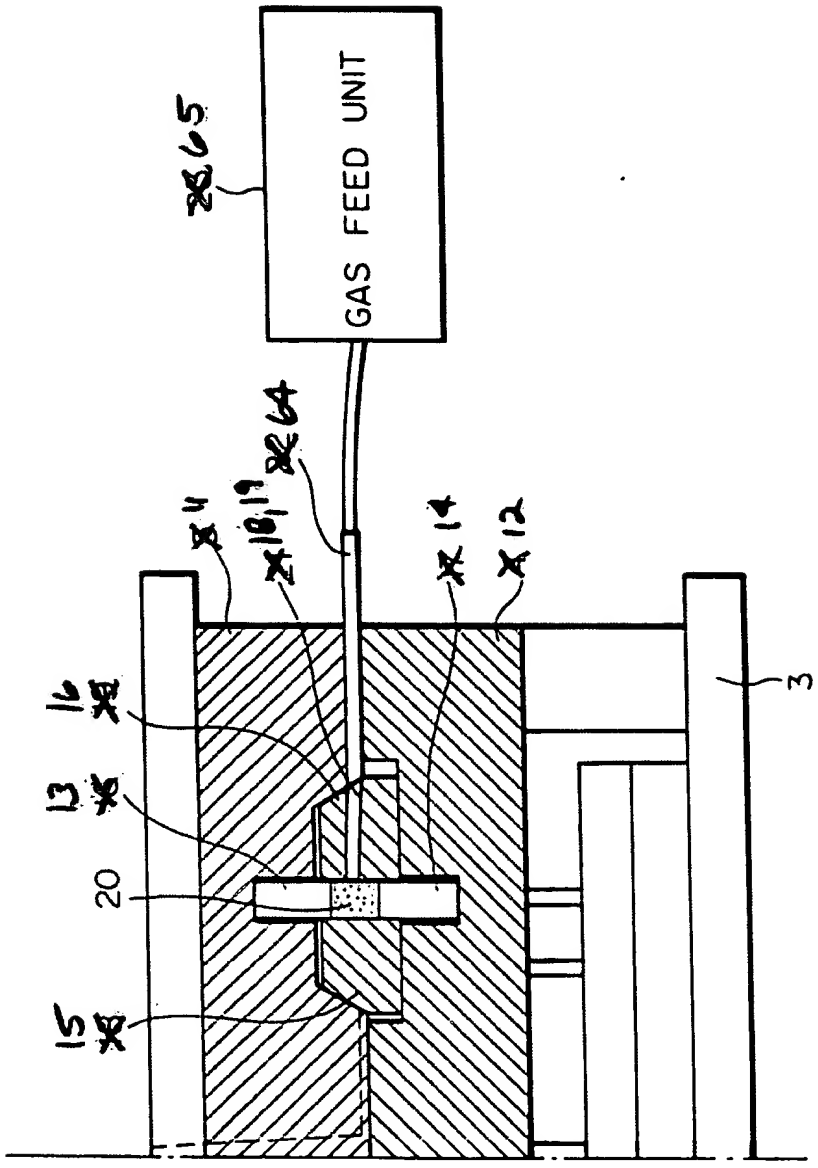

Fig. 27A

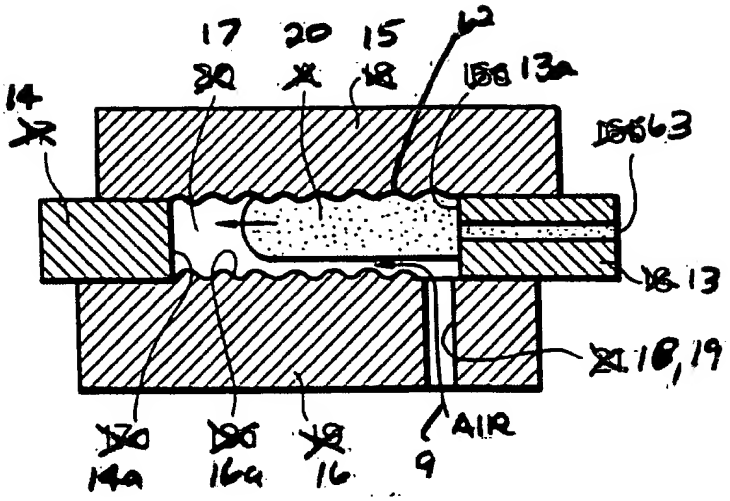

Fig. 27B

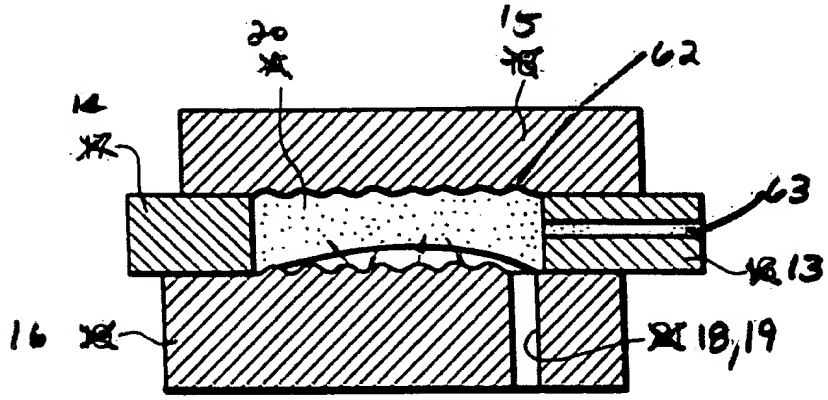

Fig. 27C

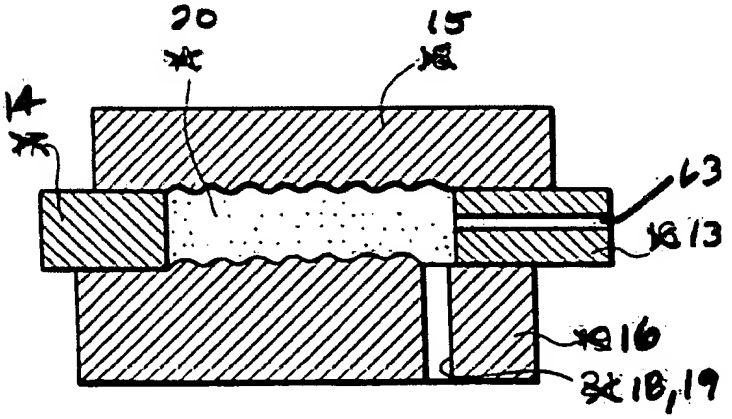

Fig. 27D

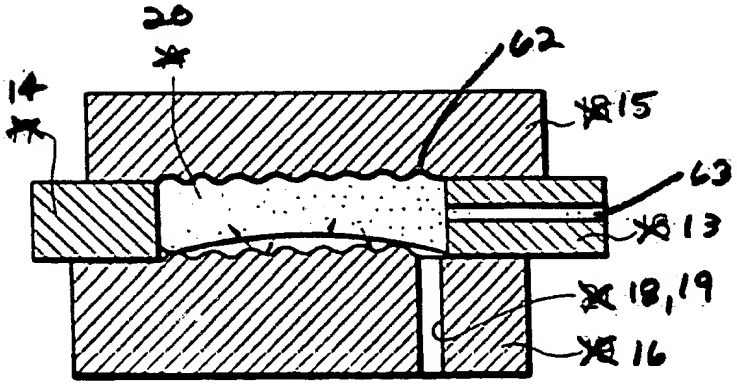

Fig. 28A

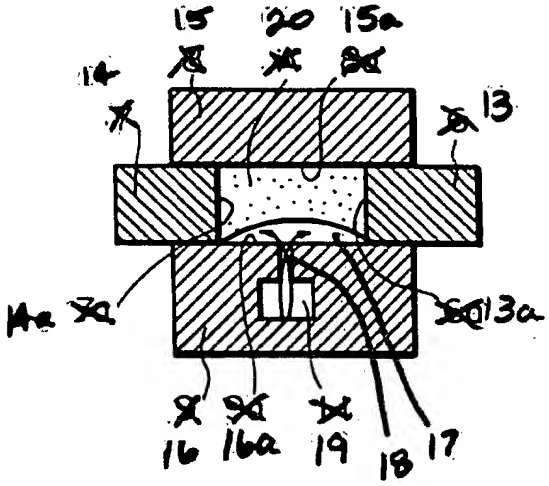

Fig. 28B

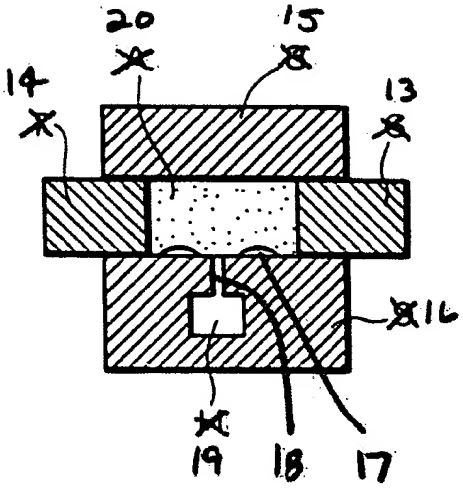

Fig. 28C

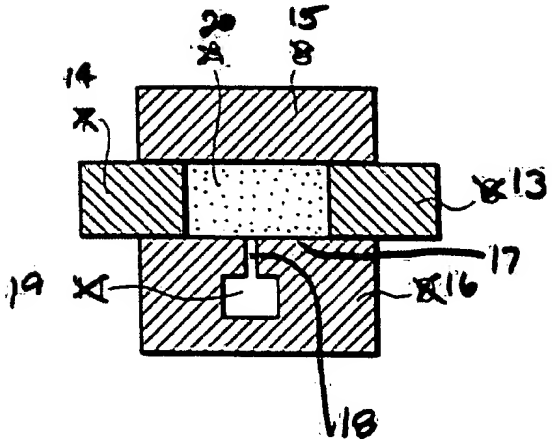

Fig. 28D

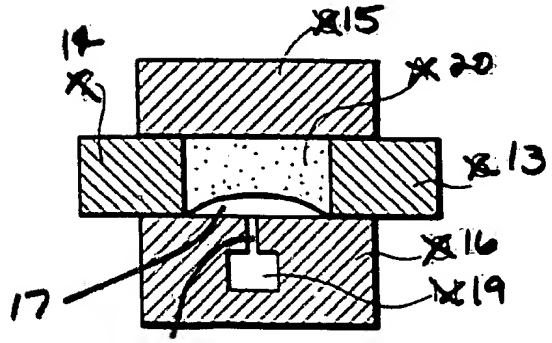

Fig. 29

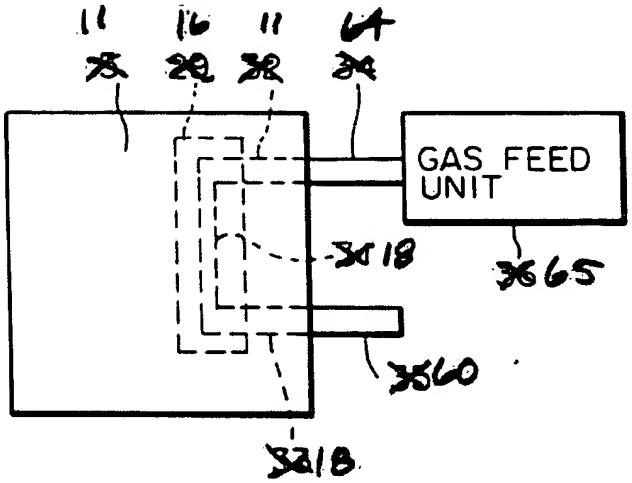

Fig. 30A

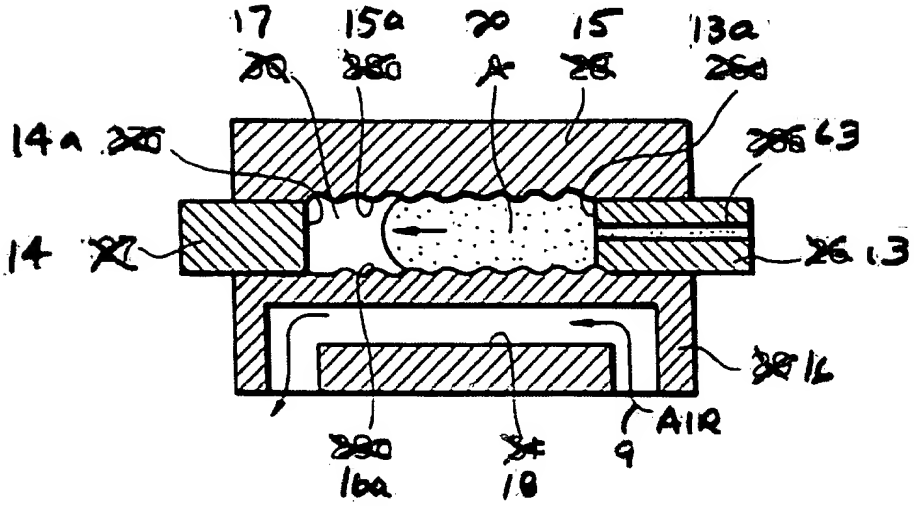

Fig. 30B

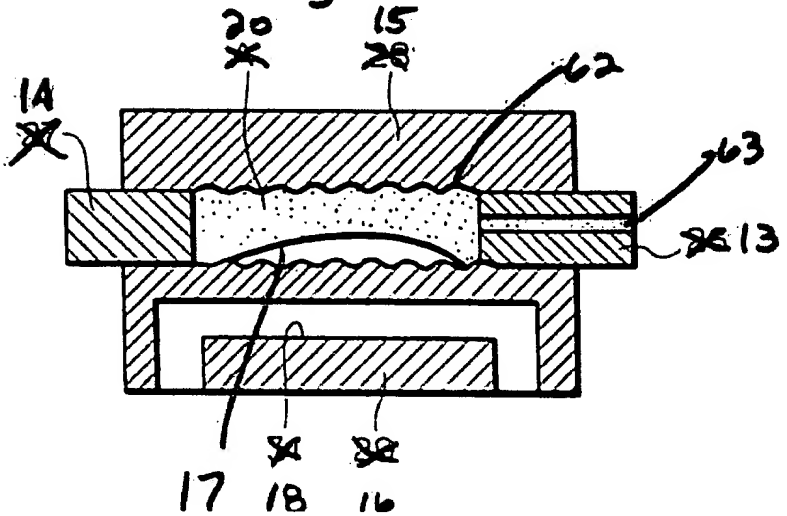

Fig. 31

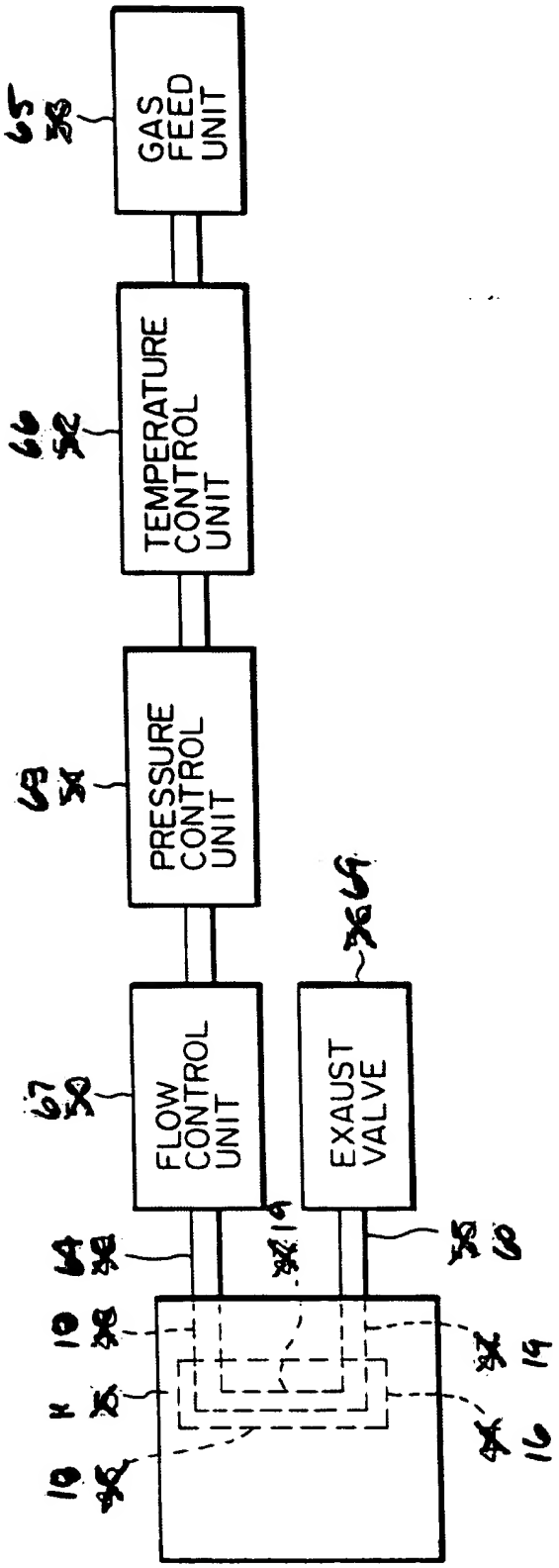

Fig. 32A

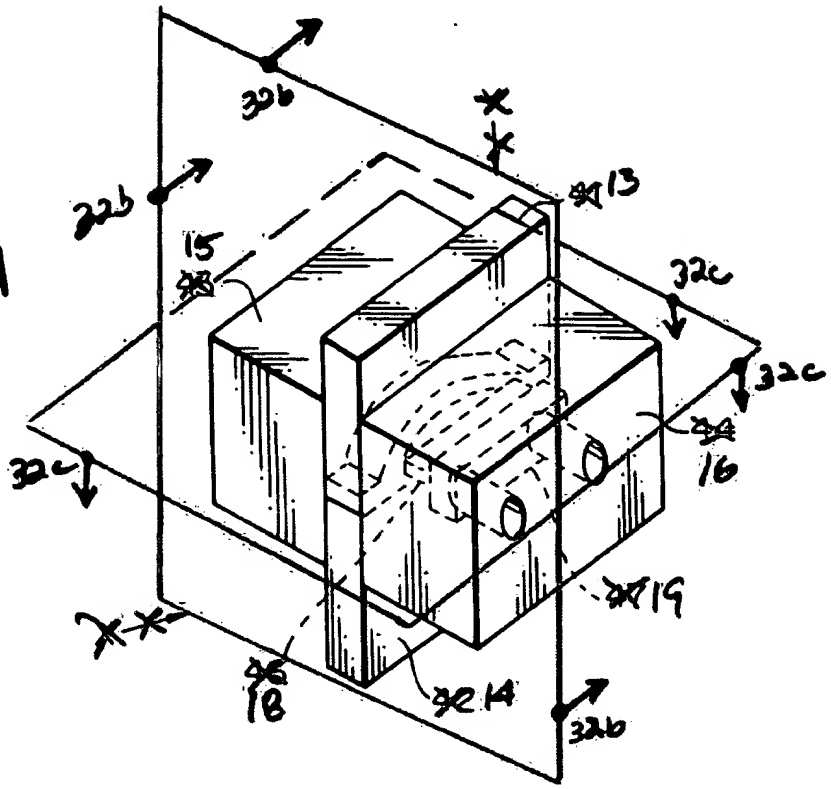

Fig. 32B

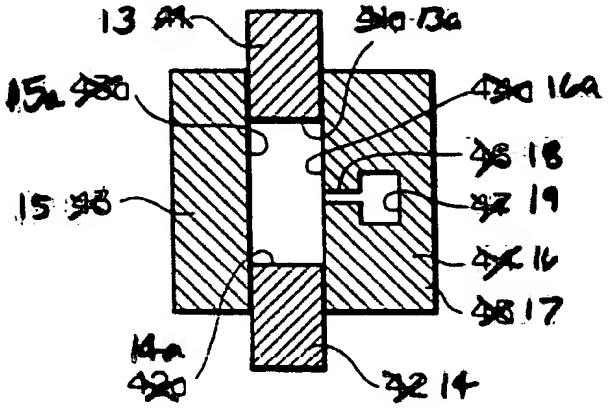

Fig. 32C

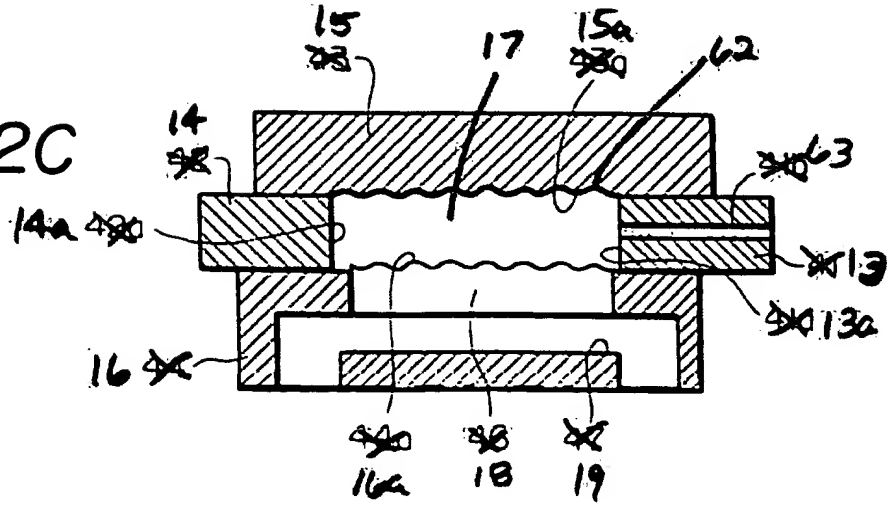

Fig. 33A

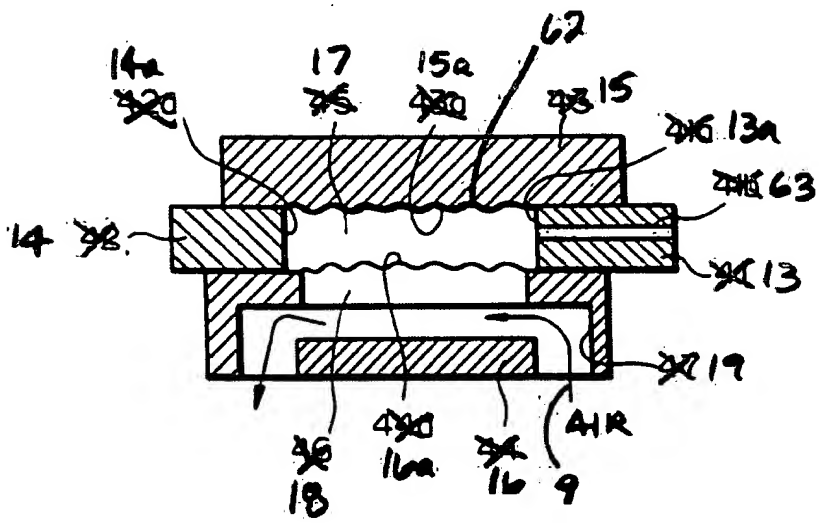

Fig. 33B

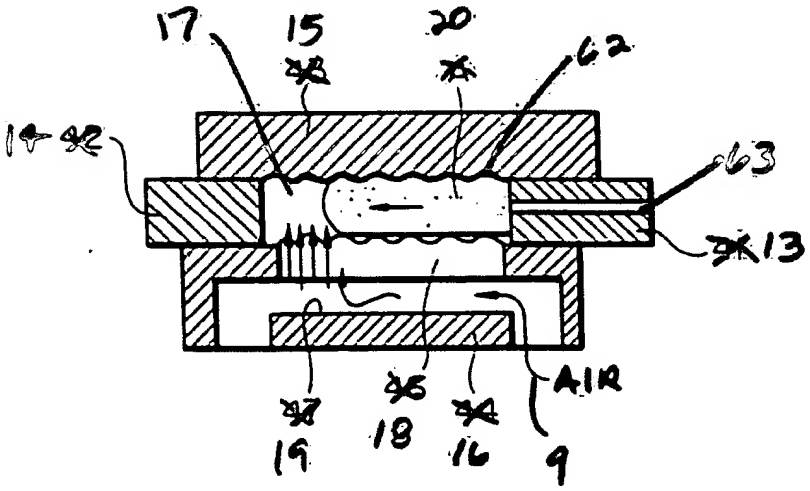

Fig. 34A

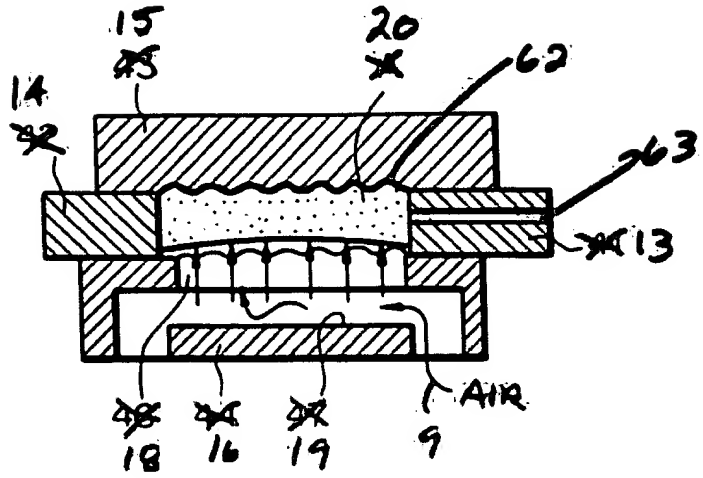

Fig. 34B

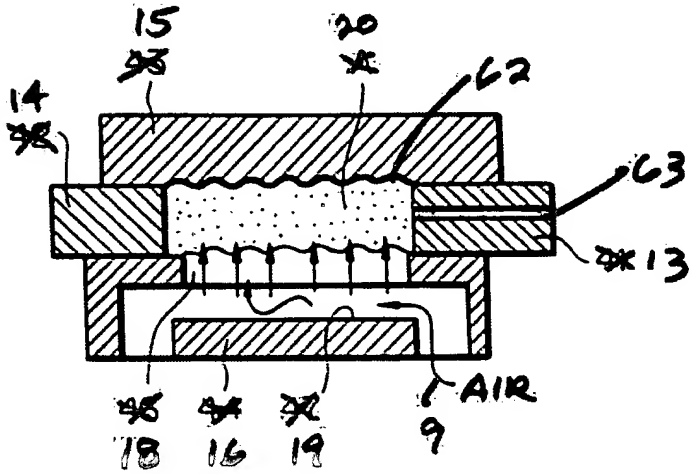

Fig. 34C

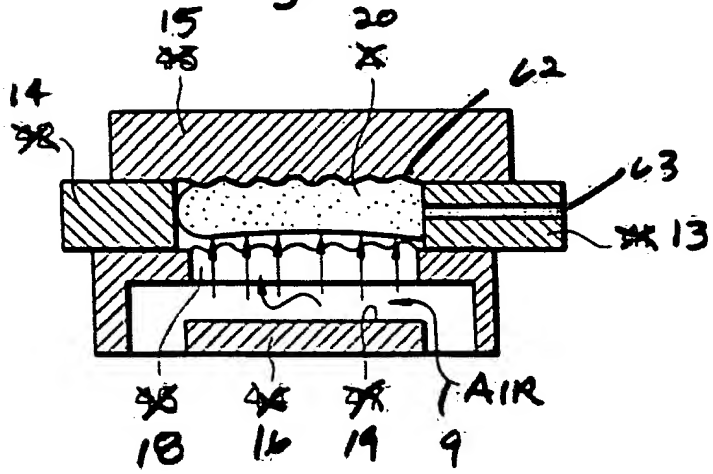

Fig. 35